REMARKS

Reconsideration of this application is respectfully requested.

Claim 18 was rejected under 35 U.S.C. § 112, second paragraph as being indefinite, because the term, "the threshold voltage" lacked antecedent basis, and the claim did not indicate the device to which the threshold voltage pertains. Claim 18 is amended to clarify that "a threshold voltage to achieve hot carrier effects in the first and second resistors is 1.2V." Support for the amendment is provided in paragraph [0021], which states, "For example, VDDH is 3.3V and the threshold voltage to achieve hot carrier effect is 1.2V." Further, from the context (e.g., paragraphs [0019] and [0020], one of ordinary skill in the art would have recognized that the hot carrier effects referenced in paragraph [0019] occur in the resistors (e.g., R0 and R1), not in the transistors of the programming trigger modules as suggested by the Action. (Paragraphs [0019] and [0020] indicate that the programming trigger modules include thick gate devices used to withstand a voltage, which is typically higher than operating voltage, necessary to successfully cause current stress across R0 and R1). Therefore, the amendment to claim 18 does not introduce any new matter. Withdrawal of the rejection of claim 18 is respectfully requested.

Claim 16 was rejected under 35 U.S.C. § 102 as being anticipated by Rao et al. (USP 6,208,549). Claim 16 is amended to be clearly distinguishable from Rao et al. Amended claim 16 recites, "the first and second control voltage levels are imposed to program either the first or second resistor by causing a current stress across the resistor that causes hot carrier effects for programming the memory circuit." (emphasis added).

Rao et al. neither disclose nor suggest this feature of claim 16. Rao et al. recite,

> The device size of p-channel transistor 102 is selected such that approximately 5 mA flows through polycide resistor 121 under these conditions. In response, the titanium silicide layer in polycide resistor 121 heats up and becomes discontinuous, thereby increasing the resistance of polycide resistor 121 to more than 1000 ohms. Polycide resistor 121 therefore operates as a fuse.

Rao et al requires a titanium silicide layer that heats up and becomes discontinuous. This is a very different mechanism from the claimed hot carrier effects. "Hot carriers" refers to either holes or electrons that have gained very high kinetic energy after being accelerated by a strong electric field within a semiconductor device. Because of their high kinetic energy, hot carriers can get injected and trapped in areas of the device, forming a space charge that causes the device to degrade or become unstable. The term "hot carrier effects", therefore, refers to device degradation or instability caused by hot carrier injection. The claimed hot carrier effects can program the resistors without requiring the titanium silicide layer that heats up and becomes discontinuous as taught by Rao et al.

Therefore, amended claim 16 should be allowable over Rao et al. Withdrawal of the rejection of claim 16 is respectfully requested.

Applicants acknowledge with appreciation the examiner's indication that claims 1-15 and 23-27 are allowed, and claims 17 and 19-22 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim. However, in view of the above referenced amendment to claim 16, Applicant submits that amendment of claims 17 and 19-22 is not necessary, and that these claims are allowable in their present form.

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Early notification to that effect is respectfully requested.

The Assistant Commissioner for Patents is hereby authorized to charge any additional

fees or credit any excess payment that may be associated with this communication to deposit account **04-1679.**

Respectfully submitted,

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